

Patent claims

1. A magnetic component which is integrated on a substrate, comprising
 - at least one first electrical conductor which has at least one turn,
 - at least one first magnetic conductor composed of at least one first layer of magnetic material, with the domains of the magnetic material being aligned along a first direction, and the turn of the first electrical conductor surrounding the first magnetic conductor, and
 - at least one second magnetic conductor composed of at least one second layer, which is different to the first layer, of magnetic material, with the domains of the magnetic material being aligned along a second direction, and the first and the second magnetic conductors being arranged one behind the other in a magnetic circuit, such that
 - a magnetic field which is produced by a current in the first electrical conductor is carried in the magnetic conductors, and the magnetic field in the first magnetic conductor is aligned essentially at right angles to the first direction, and in the second magnetic conductor is aligned essentially at right angles to the second direction.
2. The component as claimed in claim 1, wherein at least one of the magnetic conductors is slotted.
3. The component as claimed in claim 1, wherein at least one of the magnetic conductors is a layer sequence composed of magnetic layers and electrically insulating layers.
4. The component as claimed in claim 1, wherein the magnetic material is a soft-magnetic material.
5. The component as claimed in claim 1, wherein the first and the second magnetic conductors are arranged in different planes.

6. The component as claimed in claim 1, wherein the first and the second magnetic conductors form a closed magnetic circuit.
7. The component as claimed in claim 1, wherein the electrical conductor is formed from copper.
8. The component as claimed in claim 1, wherein the electrical conductor is in the form of two metalization planes, which are connected by means of vias.
9. The component as claimed in claim 8, wherein contact holes, through which the vias are passed, are provided in the first layer of magnetic material.
10. The component as claimed in claim 1, wherein a second electrical conductor having at least one turn is provided, with the turn of the second electrical conductor surrounding the second magnetic conductor.
11. The component as claimed in claim 10, wherein the magnetic component is in the form of a transformer.
12. The component as claimed in claim 10, wherein the magnetic component is in the form of an inductance with two coils of opposite polarity.